

IN THE CLAIMS:

1. (Currently Amended) A transponder for an RFID system, comprising:
 - a) a substrate including RF receiving and transmitting means;
 - b) data storage means storing packetized data in standardized and globally addressable data formats transportable in a distributed information network comprising the I[i]nternet; and
 - c) identifying code in the format identifying the data format.
2. (Original) The transponder of Claim 1 further comprising:
 - d) signal means responsive to an activation signal for transmitting or receiving and storing packetized data.
3. (Original) The transponder of Claim 2 wherein the data formats are UDP and IP, alone or in combination.
4. (Original) The transponder of Claim 2 wherein the packetized data is at least partly compressed.
5. (Currently Amended) A mobile device in a RFID system, comprising:
 - a) signal apparatus transmitting activation signals and sending/receiving packetized datagrams in standardized and globally addressable data formats transportable in a distributed information system comprising the Internet to/from at least one transponder;
 - b) a communication protocol stack processing and routing the packetized datagrams within the device or to a network;
 - c) stored programs operating the device in the RFID system and implementing communications with a network; and

d) reading apparatus processing the packetized datagrams from a transponder for delivery to a network or application in a standardized and globally addressable data format.

6. (Currently Amended) The mobile device of Claim 5 further comprising:

e) at least one application stored in the device and responsive to the packetized data in the standardized and globally addressable data format.

7. (Original) The mobile device of Claim 5 wherein the packetized datagram is in UDP or IP or combined UDP/IP format including a header with at least partly compressed or shortened or omitted fields.

8. (Original) The mobile device of claim 6 further comprising:

f) header processing means decompressing or expanding or providing omitted fields in the datagram.

9. (Original) The mobile device of Claim 8 further comprising:

g) parsing means processing datagrams for transmission to the network.

10. (Original) The mobile device of Claim 7, wherein the packetized datagrams are at least partly compressed.

11. (Currently Amended) A RFID system, comprising:

a) a transponder containing packetized datagrams in standardized and globally addressable data formats transportable in the network and responsive to activation signal;

- b) a mobile terminal generating the activation signals and sending/receiving the packetized datagrams to/from the transponder;
- c) a communication protocol stack stored in the mobile terminal processing and routing the datagrams;
- d) a network linked to the terminal receiving and transmitting the packetized datagrams; and
- e) a reader in the terminal processing the packetized datagrams transmitted from the transponder for delivery to a network or application in a standardized and globally addressable data format

12. (Original) The RFID system of Claim 11 wherein the reader is located in the network.

13. (Original) The RFID system of Claim 11 wherein the communication protocol stack checks a checksum in the packetized datagram against the packet contents and notifies the reader the transmission has failed if the checksum is not valid.

14. (Original) The RFID system of Claim 13 wherein the communication protocol stack requests a re-transmission from the transponder if the checksum is not valid.

15. (Currently Amended) The RFID system of Claim 13 wherein the communication protocol stack drops the packetized datagram or notifies an application running in the mobile terminal if ~~the~~ a re-transmission is unsuccessful.

16. (Original) The RFID system of Claim 13 wherein the communication protocol stack transmits the packetized datagram to an application running in the terminal or to an application running in the network.

17. (Original) The RFID system of Claim 13 wherein the communication protocol stack parses a header in the packetized datagram and routes the packetized datagram to a destination identified in the header if a checksum in the packetized datagram is valid.

18. (Original) The RFID system of Claim 13, wherein the packetized datagrams are at least partly compressed.

19. (Currently Amended) A method for routing packetized data between a data carrier and a destination address comprising:

- a) receiving and sending a data packet in a standardized and globally addressable format including a header and a payload from and to the data carrier;
- b) identifying a format of the data packet via a code in the data packet;
- c) processing the data packet according to the identified standardized and globally addressable format after validation of the header; and
- d) routing the processed data packet directly to a destination address defined in the standardized and globally addressable format.

20. (Currently Amended) The method according to claim 19, wherein the data packet comprises an identification data, a header data and a payload data, packetized according to any one of several standardized and globally addressable formats.

21. (Original) The method according to claim 19 wherein the data packet without identification data is transportable in the Internet.

22. (Original) The method according to claim 19, wherein the data carrier is an RFID tag.

23. (Original) The method according to claim 19, wherein the destination address is an internet address (IP address) or an IP protocol port or both.

24. (Original) The method according to claim 20, wherein the header data is UDP header data.

25. (Original) The method according to claim 20, wherein the header data is at least partly in compressed form.

26. (Original) The method according to claim 25, wherein the processing comprises decompressing the received header data.

27. (Original) The method according to claim 20 wherein the payload data is at least partly in compressed form.

28. (Original) The method according to claim 20 wherein the payload data is in uncompressed form.

29. (Original) The method according to claim 20 wherein the header data is standard IP protocol packet header data.

30. (Currently Amended) The method according to claim 19 wherein the routed packets can be directed to a network or an application within the device receptive to the standardized and globally addressable format.

31. (Original) The method according to claim 19, wherein the network can be an external network (e.g. the Internet) or a local network (such as a personal area network, or a local area network).

32. (Currently Amended) A method for writing a packetized data to a data carrier, where the data carrier is an RFID tag, comprising :

determining if a tag is writeable, and, if so, alerting an application program executable in a mobile device or a network to prepare to transmit data after a reader completes a handshake with the tag;

transmitting the data to the reader from the application program for retransmission to the tag;

appending a RFID header to the data;

receiving and storing the transmitted data in the tag which may include over-writing the data in an erasable read-only memory included in the tag; and

transmitting an acknowledgment signal to the application via the reader

33. (Currently Amended) A system for routing packetized data comprising:

a) at least one data carrier having at least one data packet embedded therein in a standardized and globally addressable format;

b) a data receiving (reading) device or data sending (writing) device for receiving or sending the at least one embedded data packet from the said at least one data carrier;

c) a data routing device connectable to the data receiving device for routing the received data packet directly to a destination address;

d) [A] an application in the data receiving device receptive to the standardized and globally addressable format for receiving the routed data packet.

34. (Original) A system of Claim 33, wherein the at least one data packet is at least partly compressed.

35. (Original) A system of Claim 33, wherein the at least one data packet is transportable in the Internet.

36. (Currently Amended) A medium, executable in a computer system, for routing packetized data between a data carrier and destination address, the medium comprising:

- a) program code for receiving and sending a data packet in a standardized and globally addressable format from and to the data carrier;
- b) program code for identifying a code in the [a] format of the data packet identifying the format;
- c) program code for processing the data packet according to the identified standardized and globally addressable format; and
- d) program code for routing the processed data packet to a destination address defined in the standardized and globally addressable format and without alteration of the data packet.

Please add the following New Claims:

37. (NEW) A transponder for an RFID system, comprising:

- a) a substrate including RF receiving and transmitting means;
- b) data storage means storing packetized data in standardized and globally addressable data formats transportable in a distributed information network comprising the I[i]nternet; c) identifying code in the format identifying the data format; and
- d) the transmitting means transmitting the packetized data to an application for routing without alteration of the packet.

38. (NEW) A mobile device in a RFID system, comprising:

- a) signal apparatus transmitting activation signals and sending/receiving packetized datagrams in standardized and globally addressable data formats transportable in a distributed information network comprising the Internet to/from at least one transponder;
- b) a communication protocol stack processing and routing the packetized datagrams within the device or to a network;

- c) stored programs operating the device in the RFID system and implementing communications with a network;
- d) reading apparatus processing the packetized datagrams from a transponder for delivery to a network or application without alteration of the packetized datagrams, wherein the packetized datagram is in UDP or IP or combined UDP/IP format including a header; and .
- e) header processing means decompressing or expanding or providing omitted fields in the datagram.

39. (NEW) A RFID system, comprising:

- a) a transponder containing packetized datagrams in standardized and globally addressable data formats transportable in the network and responsive to activation signal;
- b) a mobile terminal generating the activation signals and sending/receiving the packetized datagrams to/from the transponder;
- c) a communication protocol stack stored in the mobile terminal processing and routing the datagrams;
- d) a network linked to the terminal receiving and transmitting the packetized datagrams; and
- e) a reader in the terminal processing the packetized datagrams transmitted from the transponder for delivery to a network or application in a standardized and globally addressable data format without alteration of the packetized datagrams wherein the communication protocol stack parses a header in the packetized datagram and routes the packetized datagram to a destination identified in the header if a checksum in the packetized datagram is valid.